

What is claimed is :

1. A backlight unit for flat panel displays (FPD) comprises:
 - a lightguide, providing light propagating paths;
 - a lamp, disposed beside said lightguide to emit lights into said lightguide in an edgelight form, said lights into said lightguide can propagate therethrough in a total reflection form;
 - optical films, disposed on said lightguide for scattering lights emitted from said lightguide uniformly; and
 - a sensor board, attached to a lower surface of said lightguide, comprising an antenna array layer and a reflector surface layer, wherein said antenna array layer is applied to receive inputting signals from a hand-held stylus, and said reflector surface layer is applied to reflect lights dispersed from said lower surface of said lightguide.
2. The backlight unit of Claim 1, further comprising a reflector cover disposed around said lamp to reflect and concentrate lights of said lamp into said lightguide.
3. The backlight unit of Claim 1, wherein said optical films comprise diffuser films and brightness enhancing films for scattering lights emitted from said lightguide more uniformly.
4. The backlight unit of Claim 1, wherein said optical films comprise upper diffuser films, brightness enhancing films and lower diffuser films.

5. The backlight unit of Claim 1, wherein materials of said antenna array layer are chosen from a group of FR4 and FPC, and said antenna array layer has a thickness of 0.2~0.4 mm.

6. The backlight unit of Claim 1, wherein said reflector surface layer has a thickness of 0.2~0.4 mm, and is disposed under said antenna array layer.

7. A flat panel display comprises:

a display module, having a lower glass substrate for fabricating thin film transistors, an upper glass substrate for fabricating a color filter, and a displaying molecule layer inserted between said lower glass substrate and said upper glass substrate, wherein said lower glass substrate is connected electrically to a control circuit board via a flexible printed circuit board for driving said thin film transistor; and

a backlight unit, fabricated beneath said display module, having a lightguide, a lamp disposed aside said lightguide to emit lights into said lightguide in an edgelight form, and optical films disposed on said lightguide for scattering lights emitted from an upper surface of said lightguide uniformly;

wherein said backlight unit comprises a sensor board attached to a lower surface of said lightguide for receiving inputting signals from a hand-held stylus above said flat panel display, wherein said sensor board comprises a reflector surface layer for reflecting lights dispersed from said lower surface of said lightguide;

wherein said flexible printed circuit board is wound downward around a sidewall of said backlight unit to have said control circuit board be attached beneath said backlight unit, wherein said control circuit board is connected electrically to said sensor board via a connecting bus to decode signals received by said sensor board.

8. The flat panel display of Claim 7, wherein said displaying molecule layer is made of liquid crystal molecules.

9. The flat panel display of Claim 7, wherein said sensor board has a thickness of 0.4~0.8 mm and comprises an antenna array layer and said reflector surface layer.

10. The flat panel display of Claim 9, wherein said antenna array layer has a thickness about 0.2~0.4 mm, and materials of said antenna array board is chosen from a group of FR4 and FPC.

11. The flat panel display of Claim 9, wherein said reflector surface layer has a thickness of 0.2~0.4 mm and is fabricated on said antenna array layer.

12. The flat panel display of Claim 9, wherein said reflector surface layer is fabricated beneath said antenna array layer.

13. The flat panel display of Claim 7, further comprising a timing

control chip fabricated on said control circuit board to provide timing control signals for driving said thin film transistors and executing a logical function of decoding said signals received by said sensor board.

14. A flat panel display comprises:

a lower glass substrate, for fabricating thin film transistors;

an upper glass substrate, for fabricating a color filter;

a liquid crystal molecule layer, disposed between said upper glass substrate and said lower glass substrate;

optical films, disposed beneath said lower glass substrate for scattering lights passing therethrough uniformly;

a lightguide, disposed beneath said optical films;

a lamp, disposed aside said lightguide for emitting lights into said lightguide in an edgelight form;

a sensor board, attached beneath said lightguide for receiving signals from a hand-held stylus above said flat panel display, wherein said sensor board comprises a reflector surface layer for reflecting lights dispersed from a lower surface of said lightguide; and

a control circuit board, attached beneath said sensor board, connected electrically to said lower glass substrate via a flexible printed circuit board for driving said thin film transistors, and connected to said sensor board via a connecting bus for decoding said signals received by said sensor board.

15. The flat panel display of Claim 14, wherein said sensor board has

a thickness of 0.4~0.8 mm.

16. The flat panel display of Claim 15, wherein said sensor board further comprises an antenna array layer with a thickness about 0.2~0.4 mm, and materials of said antenna array layer is chosen from a group of FR4 and FPC.

17. The flat panel display of Claim 15, wherein said reflector surface layer has a thickness of 0.2~0.4 mm and is fabricated on said antenna array layer.

18. The flat panel display of Claim 15, wherein said reflector surface layer is fabricated beneath said antenna array layer.

19. The flat panel display of Claim 14, further comprising a timing control chip fabricated on said control circuit board to provide timing control signals for driving said thin film transistors and executing a logical function of decoding signals from said sensor board.